

# Imaging and time-stamping optical photons with nanosecond resolution for QIS applications

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*Friday, October 23, 2020 1:00 PM (1 hour)*

I will discuss fast optical cameras based on the back-illuminated silicon sensor and Timepix3 ASIC. The sensor has high quantum efficiency and the chip provides ns scale resolution and data-driven readout with 80Mpix/sec bandwidth. The intensified version of the camera is single photon sensitive and since recently has been used for registration of entangled photons in long-distance quantum networks and for a variety of quantum imaging experiments as well as in other applications such as imaging mass spectroscopy and lifetime imaging. I will show recent results focusing on the quantum applications and will discuss possible future directions for the technology.

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